

## THE COSMETIDÆ OF THE UNITED STATES.

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The family Cosmetidæ belongs to the suborder Mecostethi (Laniatores Thorell) of the order Opileonea. The first species from the United States was described\* by Thomas Say as *Gonyleptes ornatum*, from specimens taken in Georgia and Florida. In 1868, Dr. H. C. Wood described† a form from Texas under Say's name, concerning the identity of which he expresses doubt. Several years later E. Simon, in his *Essai d'une Classification des Opileones Mecostethi*,‡ states that *G. ornatum* probably belongs to the genus *Cynorta*, and that the Texas species described by Wood is different from Say's Florida species; he proposes to call the former *C. Sayi*. Finally, in 1884, Wm. Sorensen, in his *Opileones Laniatores Musei Hauniensis*,§ described as *Cosmetus albolineatus*, a species from New Orleans, which he says perhaps belongs to the genus *Cynorta*.

The present study is based upon a collection of nearly two hundred specimens from Texas, Louisiana, Mississippi, Illinois and Florida. Those from Illinois belong to the Illinois State Laboratory of Natural History, while the others are in my own collection. The accompanying plate was drawn by Miss Freda Detmers.

### Family COSMETIDÆ.

Two front pairs of legs with one claw; two hind pairs with two claws; spiracles conspicuous; hind coxæ united to abdomen; palpi short, with femora compressed; tibia lamellate on both margins; tarsus short, armed with a short, strong claw.

The three species of this family as yet found in the United States all appear to belong to the genus *Cynorta* of C. Koch, which is characterized by Simon|| substantially as follows:

Body usually longer than broad, with scutum slightly convex and not depressed in middle; scutum and ocular tubercle more or less tuberculate; palpal

\* Journ. Phila. Acad. 1st ser. v. 2, p. 68.

† Comm. Essex Inst. v. vi, p. 37.

‡ Ann. de la Soc. Ent. de Belgique, 1879, p. 200.

§ Naturhist. Tidskrift, ser. iii, vol. xiv, p. 592.

|| Ann. Soc. Ent. de Belgique, 1879, p. 190.

patella not lamellate. Legs rather short, more or less robust, first tarsus 6-jointed, with first joint not much longer than the rest, and joints 1, 2, 3, or 4 thickened, third and fourth tarsi slender.

In order to consider that in these species the first tarsus is 6-jointed, one must include the joint at the end of the metatarsus attached to the latter by an oblique false articulation (see plate vi, fig. 2, *e*). The thickening of these first tarsi is also not very distinct.

The three United States species of *Cynorta* may be separated by the following key:

- Posterior pair of abdominal tubercles very prominent; four or five times as large as anterior pair.....**C. ornata.**  
 Posterior pair of abdominal tubercles little larger than anterior.  
   Dorsum with a distinct yellow Y connected posteriorly with a distinct transverse yellow line.....**C. albolineata.**  
   Dorsum without, or with very little yellow marking.....**C. sayi.**

***Cynorta sayi* Simon.**

*Gonyleptes ornatum* Wood, *Conn. Essex Inst.* vi, 37.

*Cynorta sayi* Simon, *Ann. de la Soc. Ent. de Belgique*, 1879, p. 200.

Body 6 mm. long; 5 mm. wide. Legs: first, 8.5 mm.; second, 13.5 mm.; third, 11.5 mm.; fourth, 15 mm. General color ferruginous brown, more or less blotched with a darker shade. Legs dusky toward distal ends. In some specimens there is a more or less distinct yellow marking on dorso-meson behind eye eminence, and a transverse line near posterior margin of abdominal scutum. Eye eminence very low and wide, with a longitudinal depression between the black eyes; a pair of small, low, blunt tubercles on abdominal scutum, just back of suture between cephalothorax and abdomen; another similar pair about 2 mm. caudad of this, and behind the latter are three similar tubercles arranged transversely. The central portion of the abdominal scutum is finely and remotely tuberculate, and its margins together with the margin of the posterior abdominal segments (both on dorsum and ventrum) are much more distinctly tuberculate, the tubercles being rounded, and on the segments arranged in transverse rows; a large, distinct, slightly curved tooth is on the outer dorsal surface of the hind margin of each posterior coxa. Legs furnished with longitudinal rows of small acute tubercles. Mandibles short, first joint with a large truncate tubercle-like projection on the dorsal surface of its distal half; second joint rounded and swollen, with its claws unequal, the larger one being curved, and both having not very distinct teeth. Palpi short, robust; femur compressed, its lower surface crenulate; patella arched, swollen from base to extremity; tibia much flattened, margined at the side; tarsus short, its lower edge furnished with a few spinose hairs, armed with a strong curved claw. Genital organ of male straight, cylindrical, distally much enlarged and abruptly truncated, its end furnished on each side with three curved, hook-like spines.\*

Described from many specimens. Houston and Harwood, Texas (H. F. Wickham); Brazos County, Texas (N. Banks).

\* Wood.

**Cynorta albolineata** (Sorensen) Weed. Plate vi.

*Cosmetus albolineatus* Sorensen, Natur. Tidsskrift, ser. iii, vol. xiv, p. 592.

Body 5 mm. long; 4 mm. wide. Legs: first, 8 mm.; second, 15 mm.; third, 11 mm.; fourth 15 mm. General color dark reddish brown, with apical portions of legs dusky. Dorsum striped with light yellow, as follows: a distinct V enclosing the eye eminence and having a straight line running on dorso-meson from base of V back to a rather wide, transverse, wavy line running across abdominal scutum just back of the posterior pair of tubercles. Between the two pairs of tubercles on abdominal scutum are two transverse lines, and on the side margins of the scutum there is more or less blotching with yellow. These blotches and the last-named transverse lines, and sometimes even the line on the dorso-meson, are often subobsolete, represented only by scattered yellow dots. Eye eminence very low and wide, with a longitudinal depression between the black eyes and a few small tubercles over the eyes; a pair of small, rounded tubercles on abdominal scutum, slightly behind base of V; another similar pair about 1.5 mm. caudad of this front pair, the hind ones being about twice as large as the front ones. There are a few small and scattered tubercles on the central portion of the abdominal scutum, and its margins together with the margins of the posterior abdominal segments (both on dorsum and ventrum) are much more distinctly tuberculate, the tubercles being rounded and on the segments arranged in transverse rows; a moderate tooth on outer dorsal surface of hind margin of each posterior coxa. Mandibles and palpi similar to those of *C. sayi*.

Described from many specimens; Agricultural College, Mississippi (H. E. Weed); Macomb, Miss. (F. S. Earle); Morgan City, La. (H. F. Wickham); southern Louisiana (H. E. Weed); southern Illinois (H. Garman).

**Cynorta ornata** (Say) Simon.

*Gonyleptes ornatum* Say, Jour. Phil. Acad. Nat. Sci. 1st series, vol. ii, p. 63.

*Cynorta ornata* Simon, Ann. de la Soc. Ent. de Belgique. 1879, p. 200.

Body 6 mm. long; 5 mm. wide; palpi 3.5 mm. long. Legs: first, 10 mm.; second, 18 mm.; third, 14 mm.; fourth, 19 mm. General color dark ferruginous brown; tarsi dusky, sometimes having a greenish tinge. Dorsum striped with canary-yellow as follows: a distinct V enclosing eye eminence, the base of the V being on dorso-meson half way between eye eminences and first pair of abdominal tubercles and the sides reaching nearly to margin of cephalothorax at a point as far cephalad as is the anterior border of eye eminence; from the base of the V an interrupted line runs caudad almost to the large posterior tubercles, the back half of this line is only indicated by isolated dots; just caudad of the front pair of abdominal tubercles there is a transverse line extending nearly two-thirds across the abdominal scutum, crossing the longitudinal line on dorso-meson at right angles; half way between this line and the posterior tubercles runs another similar line which is often interrupted on the dorso-meson. Starting at the cephalo-mesal corner of the base of each of the posterior tubercles a distinct line runs around the base behind, and then proceeds obliquely forward and outward until it reaches near the margin, it then curves and proceeds obliquely backwards to the margin. There is also an interrupted yellow blotch on each outer margin of the abdominal scutum opposite the anterior transverse

transverse stripe. The degree of distinctness of these markings varies much in different specimens. The eye eminence is very broad and low, with a slight longitudinal depression between the black eyes. The first pair of tubercles is about 2 mm. behind the eye eminence; these tubercles are close together, small, low, conical and truncate. The tubercles of the second pair are situated near the posterior margin of the abdominal scutum; they are nearly 1.5 mm. high, project upward and backward, and are obtusely pointed. There is a single tubercle very similar to those on the dorso-distal margin of each posterior coxa; posterior abdominal segments with rows of equidistant rounded tubercles, giving a crenulate appearance. The inner hind margin of posterior trochanters provided with a single well-developed tubercle. Inner sides of posterior legs covered with longitudinal rows of small rounded tubercles, other legs furnished with longitudinal rows of much smaller tubercles. Mandibles short, first joint with a large, truncate, tubercle-like projection on the dorsal surface of its distal half; second joint rounded and swollen, furnished with a few hairs; claws unequal, larger one curved, both provided with teeth. Palpi short, robust; femur compressed, furnished with about five compressed, rounded teeth on ventral surface; patella arched, swollen from base to extremity, its inner margin slightly roughened; tibia much flattened, margined at the sides; tarsus short, its lower edge furnished with a few spiuose hairs; armed with a strong, curved claw.

Described from many specimens; Inverness, Fla. (C. M. Weed).

In southern Florida in the Winter of 1891-92 I found this species often exceedingly abundant in the pine woods under logs. Sometimes thirty or forty would occur under a single log.

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#### EXPLANATION OF PLATE VI.

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Fig. 1.—*Cynorta albolineata*. Natural size.

" 2.—Parts of same magnified: *a*, body; *b*, eye eminence, side view; *c*, eye eminence, front view; *d*, palpus, side view; *e*, first tarsus; *f*, second tarsus.